



# STIC Search Report

EIC 1700

STIC Database Tracking Number: 174694

TO: Eisa Elhilo  
Location: REM 9A60  
Art Unit : 1751  
December 27, 2005

Case Serial Number: 10/501833

From: Mei Huang  
Location: EIC 1700  
REMSSEN 4B28  
Phone: 571/272-3952  
Mei.huang@uspto.gov

## Search Notes

Examiner Elhilo,

- Only one answer, applicant's work, was retrieved when the structure hit was combined with "hair? ... " or "cosmetic/rl". See page 4-6;
- 24 answers were retrieved when the structure hit was combined with "color? ..or dye? ..." and "fiber? .. or textile#". See page 8-30.

If you have any questions or if you would like to refine the search query, please feel free to contact me.

Thank you for using STIC services!

Mei Huang



# STIC Search Results Feedback Form

**EIC17000**

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Kathleen Fuller, EIC 1700 Team Leader  
571/272-2505 REMSEN 4B28

## Voluntary Results Feedback Form

- I am an examiner in Workgroup:  Example: 1713
- Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

- Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

=> d his ful

(FILE 'HOME' ENTERED AT 09:29:43 ON 27 DEC 2005)

FILE 'HCAPLUS' ENTERED AT 09:29:50 ON 27 DEC 2005

E US20050155160/PN  
L1 1 SEA US2005155160/PN  
SEL RN

FILE 'REGISTRY' ENTERED AT 09:31:14 ON 27 DEC 2005

L2 70 SEA (4363-03-5/BI OR 18062-89-0/BI OR 3900-89-8/BI OR

L3 70 SEA L2 AND C6/ES  
D SCAN

L4 STR

L5 1 SEA SSS SAM L4

L6 STR L4

L7 35 SEA SSS SAM L6

DIS

D L7 QUE STAT

L8 1101 SEA SSS FUL L6

SAV L8 ELAILO833/A

L9 STR L6

L10 17 SEA SUB=L8 SSS SAM L9

L11 665 SEA SUB=L8 SSS FUL L9

SAV L11 ELAILO833S/A

L12 110 SEA L11 NOT PMS/CI

L13 65 SEA L2 AND L12

FILE 'HCAPLUS' ENTERED AT 10:30:13 ON 27 DEC 2005

L14 252 SEA L12

L15 QUE COLOR? OR COLOUR? OR PIGMENT? OR DYE? OR STAIN? OR  
PAINT?

L16 QUE KERATIN? OR HAIR? OR SCALP?

D HSI

L17 91 SEA L14 AND L15

L18 1 SEA L17 AND L16

L19 QUE FIBER? OR FABRIC? OR FIBR? OR TEXTILE#

D SCA L18

L20 24 SEA L17 AND L19

L21 1 SEA L14 AND (L16 OR SHAMPOO?)

L22 0 SEA L14 AND COSMETIC#/SC,SX

L23 1 SEA L14 AND COS/RL

L24 1 SEA L1 AND L18 OR L21 OR L23

L25 25 SEA L24 OR L20

FILE HOME

FILE HCAPLUS

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FILE COVERS 1907 - 27 Dec 2005 VOL 144 ISS 1  
FILE LAST UPDATED: 26 Dec 2005 (20051226/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

#### FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 26 DEC 2005 HIGHEST RN 870675-00-6  
DICTIONARY FILE UPDATES: 26 DEC 2005 HIGHEST RN 870675-00-6

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

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\*  
\* The CA roles and document type information have been removed from  
\* the IDE default display format and the ED field has been added,  
\* effective March 20, 2005. A new display format, IDERL, is now  
\* available and contains the CA role and document type information.  
\*  
\*\*\*\*\*

Structure search iteration limits have been increased. See HELP SLI for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

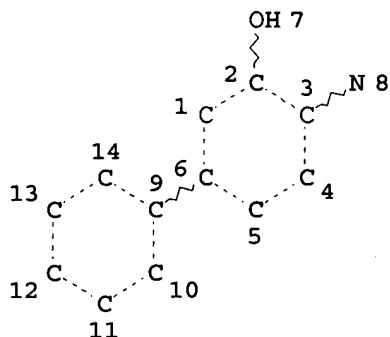
#### FILE STNGUIDE

FILE CONTAINS CURRENT INFORMATION.

LAST RELOADED: Dec 23, 2005 (20051223/UP).

=> d que stat l24

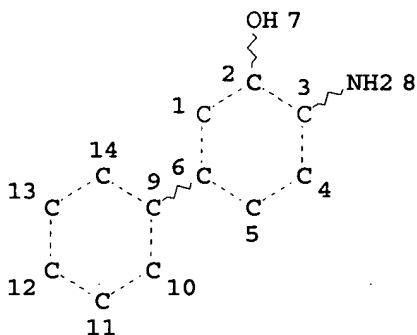
L1 1 SEA FILE=HCAPLUS US2005155160/PN  
L6 STR



NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE  
 L8 1101 SEA FILE=REGISTRY SSS FUL L6  
 L9 STR



NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE  
 L11 665 SEA FILE=REGISTRY SUB=L8 SSS FUL L9  
 L12 110 SEA FILE=REGISTRY L11 NOT PMS/CI  
 L14 252 SEA FILE=HCAPLUS L12  
 L15 QUE COLOR? OR COLOUR? OR PIGMENT? OR DYE? OR STAIN? OR P  
 AINT?  
 L16 QUE KERATIN? OR HAIR? OR SCALP?  
 L17 91 SEA FILE=HCAPLUS L14 AND L15

L18 1 SEA FILE=HCAPLUS L17 AND L16  
 L21 1 SEA FILE=HCAPLUS L14 AND (L16 OR SHAMPOO?)  
 L23 1 SEA FILE=HCAPLUS L14 AND COS/RL  
 L24 1 SEA FILE=HCAPLUS L1 AND L18 OR L21 OR L23)

=> d l24 ibib abs fhitr ind

L24 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:408222 HCAPLUS  
 DOCUMENT NUMBER: 140:412286  
 TITLE: Synthesis of 4-Amino-biphenyl-3-ol derivatives  
 and use as hair dyes  
 INVENTOR(S): Chassot, Laurent; Braun, Hans-Juergen  
 PATENT ASSIGNEE(S): Wella A.-G., Germany  
 SOURCE: Ger. Offen., 19 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10251106	A1	20040519	DE 2002-10251106	20021102
WO 2004041226	A1	20040521	WO 2003-EP4960	20030513
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
BR 2003006686	A	20041207	BR 2003-6686	20030513
US 2005155160	A1	20050721	US 2003-501833	20030513
EP 1562539	A1	20050817	EP 2003-725188	20030513
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				

PRIORITY APPLN. INFO.:

DE 2002-10251106

A

200211  
02

WO 2003-EP4960

W

200305  
13

OTHER SOURCE(S): MARPAT 140:412286

AB The invention concerns the synthesis of 4-Amino-biphenyl-3-ol derivs. and their use as **hair dyes**. The **hair dyes** further contain direct **dyes**, coupling and developing agents. Thus 4-amino-1,1'-biphenyl-3-ol was prepd. starting from 3-chloro-2-hydroxy-nitrobenzene and reacting with sodium hydride in acetone; the obtained 4-chloro-2-(ethoxymethoxy)-1-nitrobenzene was reacted with phenylboric acid, and then with 2-(dicyclohexylphosphino)-biphenyl and tripotassium phosphate in the presence of palladium acetate. 0.30 G 4-amino-1,1'-biphenyl-3-ol was used in a **hair dye** compn. that further contained (g): 4-amino-2-aminomethyl-phenol dihydrochloride 0.55; 2-methyl-1,3-dihydroxy benzene 0.22; 1-naphthol 0.30; potassium oleate (8% aq. soln.) 10; ammonia (22% aq. soln.) 10; ethanol 10.0; ascorbic acid 0.3; water to 100.

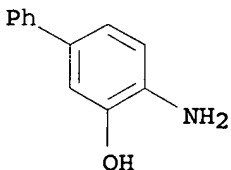
IT 4363-03-5D, derivs.

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(synthesis of 4-Amino-biphenyl-3-ol derivs. and use as **hair dyes**)

RN 4363-03-5 HCAPLUS

CN [1,1'-Biphenyl]-3-ol, 4-amino- (9CI) (CA INDEX NAME)



IC ICM C07C215-76

ICS A61K007-13

CC 63-3 (Pharmaceuticals)

Section cross-reference(s): 25

ST amino biphenyl derivate **hair dye**IT **Dyes**

(direct; synthesis of 4-Amino-biphenyl-3-ol derivs. and use as **hair dyes**)

IT **Hair preparations**

(**dyes**, oxidative; synthesis of 4-Amino-biphenyl-3-ol derivs. and use as **hair dyes**)

IT **Hair preparations**

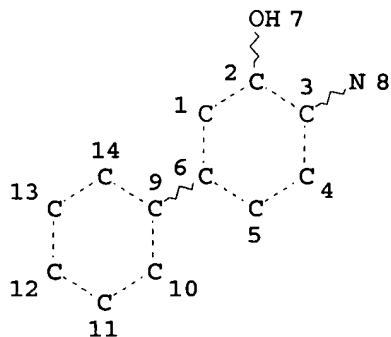
(**dyes**; synthesis of 4-Amino-biphenyl-3-ol derivs. and use as **hair dyes**)

IT pH

(synthesis of 4-Amino-biphenyl-3-ol derivs. and use as

hair dyes)  
IT 4363-03-5D, derivs. 688746-23-8  
688746-24-9 688746-25-0 688746-26-1  
688746-27-2 688746-28-3 688746-29-4  
688746-30-7 688746-31-8 688746-32-9  
688746-33-0 688746-34-1 688746-35-2  
688746-36-3 688746-37-4 688746-38-5  
688746-39-6 688746-40-9 688746-41-0  
688746-42-1 688746-43-2 688746-44-3  
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688746-85-2 688746-86-3  
RL: COS (Cosmetic use); BIOL (Biological study); USES  
(Uses)  
(synthesis of 4-Amino-biphenyl-3-ol derivs. and use as  
hair dyes)  
IT 4363-03-5P 688746-21-6P  
RL: COS (Cosmetic use); PRP (Properties); SPN (Synthetic  
preparation); BIOL (Biological study); PREP (Preparation); USES  
(Uses)  
(synthesis of 4-Amino-biphenyl-3-ol derivs. and use as  
hair dyes)  
IT 18062-89-0P 688746-20-5P 688746-22-7P  
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation);  
PREP (Preparation); RACT (Reactant or reagent)  
(synthesis of 4-Amino-biphenyl-3-ol derivs. and use as  
hair dyes)  
IT 611-07-4 3900-89-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(synthesis of 4-Amino-biphenyl-3-ol derivs. and use as  
hair dyes)  
  
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L6 STR

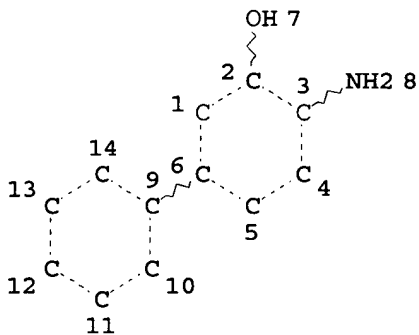




NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE  
 L8 1101 SEA FILE=REGISTRY SSS FUL L6  
 L9 STR



NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE  
 L11 665 SEA FILE=REGISTRY SUB=L8 SSS FUL L9  
 L12 110 SEA FILE=REGISTRY L11 NOT PMS/CI  
 L14 252 SEA FILE=HCAPLUS L12  
 L15 QUE COLOR? OR COLOUR? OR PIGMENT? OR DYE? OR STAIN? OR P  
 AINT?  
 L17 91 SEA FILE=HCAPLUS L14 AND L15  
 L19 QUE FIBER? OR FABRIC? OR FIBR? OR TEXTILE#

L20 24 SEA FILE=HCAPLUS L17 AND L19

=&gt; d l20 ibib abs fhitr 1-

YOU HAVE REQUESTED DATA FROM 24 ANSWERS - CONTINUE? Y/(N):y

L20 ANSWER 1 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1957:74446 HCAPLUS

DOCUMENT NUMBER: 51:74446

ORIGINAL REFERENCE NO.: 51:13404d-i

TITLE: Chromium- and cobalt-containing azo dyes  
of the 1-phenyl-azo-2-hydroxy-3-  
naphthalenecarboxylic acid series

PATENT ASSIGNEE(S): Sandoz Ltd.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

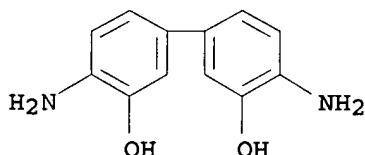
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
GB 772019		19570410	GB	
DE 1053693			DE	

AB Metalliferous dyes for wool, silk, leather, and synthetic polyamide fibers are prep'd. Their metal-free compds. have the general formula 1,2,3-(XRN:N)(HO)C<sub>10</sub>H<sub>5</sub>CONR'R'', where R' is H, lower alkyl, hydroxyalkyl, alkoxyalkyl, aralkyl, cycloalkyl or phenyl; R'' is H, lower alkyl or together with R' and a tertiary N is a heterocyclic amine; X is ortho to the azo group and is capable of metal complexing; R is a phenylene radical which may carry a N-substituted SO<sub>2</sub>NH<sub>2</sub> group or an alkylsulfonyl group. They are prep'd. by coupling 1 mole of the diazo compd. of a substituted PhNH<sub>2</sub> with 1 mole of a 2-hydroxy-3-naphthalenecarboxamide. Thus, 20.2 parts of 3-amino-4-hydroxy-N-methylbenzenesulfonamide (I) is diazotized, coupled at 0-5° with 20.1 parts 2-hydroxy-N-methyl-3-naphthalenecarboxamide (II) in 150 H<sub>2</sub>O contg. 5 NaOH and 5 Na<sub>2</sub>CO<sub>3</sub>; the dye is pptd. with NaCl as a dark powder. This monoazo dye 41.4 parts in 1000 H<sub>2</sub>O with 3 NaOH are treated for 30 min. at 60° with 14.2 CoSO<sub>4</sub>, 5.6 NaOH, and 125 aq. 3% tartaric acid soln., pptd. with NaCl, filtered, dried, and ground to give a dark powder which gives Bordeaux-red shades of good light-fastness. The Cr dye gives violet shades. Replacement of I by 2-amino-1-hydroxy-4-chlorobenzene-5-sulfonamide and reaction with II gives a violet Co dye, a blue Cr dye. Diazotized 4-amino-3-hydroxybenzenesulfonamide (III) and 2-hydroxynaphthalene-3-(N-phenyl)carboxamide (IV) give a violet Co-complex, a blue Cr complex dye. Diazotized 3-amino-4-hydroxy-N-(4-methoxyphenyl)benzenesulfonamide and 2-hydroxy-3-naphthalenecarboxamide (V) give a clear Bordeaux-red Co dye, a brownish violet Cr dye. Diazotized 4-amino-3-hydroxy-N-(2-methoxyphenyl)benzenesulfonamide and V give a violet Co dye, a violet-blue Cr dye. The metal free dye from III and IV treated with the azo dye obtained from diazotized 2-amino-4-chlorophenol (VI) and

1-acetamido-7-hydroxynaphthalene gives a blue Cr dye when treated with  $\text{NH}_4\text{Cr}(\text{SO}_4)_2$  and  $\text{HCONH}_2$ . The dye from diazotized 3-amino-4-hydroxy-N-(2-methylphenyl)-benzenesulfonamide and V treated with the monoazo dye from diazotized VI with 2-naphthol, then with  $\text{CoSO}_4$  gives a clear Bordeaux-red dye

IT 2373-98-0, m,m'-Biphenol, 6,6'-diamino-  
(azo dyes from)  
RN 2373-98-0 HCAPLUS  
CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 2 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1950:39498 HCAPLUS  
DOCUMENT NUMBER: 44:39498  
ORIGINAL REFERENCE NO.: 44:7547i,7548a-f  
TITLE: Copper-containing azo dyes  
PATENT ASSIGNEE(S): Sandoz Ltd.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 633206		19491212	GB	

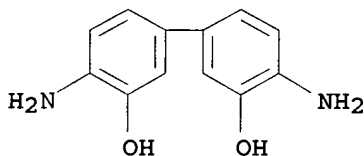
GI For diagram(s), see printed CA Issue.  
AB Copper-contg. azo dyes are prepd. by coupling 1 mol. of a tetrazotized 3,3'-dialkoxybenzidine with 1 mol. of a naphtholsulfonic acid and 1 mol. of an azine of the formula (Ia), where -C:C- is a portion of an aryl residue. The dyes are treated with copper-yielding materials in substance or on the fiber. 3,3'-Dimethoxybenzidine (I) 24.4 is tetrazotized and coupled with 1-naphthol-4,8-disulfonic acid 30.4 in the presence of  $\text{Na}_2\text{CO}_3$ ; an alk. soln. of the Na salt from 4-hydroxybenzo[a]phenazine-2-sulfonic acid (II) 32.6 is added. To facilitate the coupling 5-10% of a mixt. of pyridine bases may be added. The resulting dye is reddish blue in  $\text{H}_2\text{O}$  and gray-blue in  $\text{H}_2\text{SO}_4$ . A soln. 500 contg. cryst.  $\text{CuSO}_4$  50 and concd. aq.  $\text{NH}_3$  85 parts is added gradually at 80-90° to a soln. of the above dye 96.2 and  $\text{Na}_2\text{CO}_3$  20 in  $\text{H}_2\text{O}$  3000 parts; the mixt. is stirred at 90° for 5 hrs. and then refluxed for 18 hrs. The copper complex is isolated, filtered, and dried; it dyes cotton and regenerated cellulose in blue-gray shades of very good fastness to light and to washing. In a similar fashion copperable dyes were prepared by coupling tetrazotized I, on the one

hand with 1-naphthol-3,6 (or 3,8)-disulfonic acid, 3-naphthol-3,6-disulfonic acid, 1-naphthol-3,6,8-trisulfonic acid, and 1,8-naphthalenediol-3,6-disulfonic acid, and on the other hand with II, the 10-methoxy-, 10-methyl-, and 10-carboxy- derivatives of II, 4,10-dihydroxy-2-sulfobenzo[a]phenazine-9(or 11)-carboxylic acid, 12-hydroxytribenzo[a,c,h]phenazine-14-sulfonic acid, 4,11-dihydroxydibenzo[a,h]phenazine-2,9-disulfonic acid, and 1,10-dihydroxydibenzo[a,j]phenazine-3,12-disulfonic acid. The phenazines were prepd. by the procedures given in French 679,164 (C.A. 24, 3909) and Brit. 318,839 (C.A. 24, 2610) and by condensing 1,2-diamino-5-naphthol-7-sulfonic acid with ortho diketones. The **dyes**, after coppering, **color** cotton in greenish blue to blue-gray to greenish blue-gray shades.

IT 2373-98-0, m,m'-Biphenol, 6,6'-diamino-  
(**dyes** from)

RN 2373-98-0 HCAPLUS

CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 3 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1950:39492 HCAPLUS

DOCUMENT NUMBER: 44:39492

ORIGINAL REFERENCE NO.: 44:7547c-f

TITLE: Metallizable azo **dyes**

PATENT ASSIGNEE(S): C I B A Ltd.

SOURCE: Addn. to Swiss 253,712 (C.A. 44, 6135i)

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CH 259325		19490606	CH	

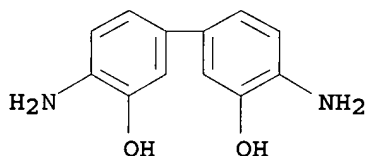
AB The disazo **dye** (I) prepd. by coupling diazotized 5-(4-amino-2-sulfophenylazo)salicylic acid (II) (from 33.7 parts of the amine) with 2,4-(H<sub>2</sub>N)MeC<sub>6</sub>H<sub>3</sub>OMe (III) and the disazo **dye** prepd. by coupling diazotized II (from 33.7 parts of the amine) with m-MeC<sub>5</sub>H<sub>4</sub>NH<sub>2</sub> are treated together at 40-50° in H<sub>2</sub>O (weakly alk.) 10,000 parts with COCl<sub>2</sub> until no primary amine remains. The product, a brown powder, **dyes** vegetable **fibers** wash-fast red shades by the one- or two-bath after-coppering procedures. In Swiss 259,326, I is treated with COCl<sub>2</sub> to give a red-brown **dye**, which **colors** vegetable **fibers** fast red shades by the one- or two-bath after-coppering procedures. In Swiss 259,327, the disazo

dye prepd. by coupling 5-(4-amino-3-sulfophenylazo)salicylic acid with III is treated with COCl<sub>2</sub> to give a red-brown dye, which dyes vegetable fibers fast red shades by the one- or two-bath after-coppering procedures. In Swiss 259,328, the disazo dye prepd. by coupling diazotized II with PhNH<sub>2</sub> is treated with COCl<sub>2</sub> to give a brown dye, which colors vegetable fibers wash-fast red-orange shades by the one- or two-bath after-coppering procedures. In Swiss 259,329, the disazo dye prepd. by coupling diazotized 5-(4-amino-2-sulfophenylazo)-2,3-cresotic acid with III is treated with COCl<sub>2</sub> to give a brown dye, which colors vegetable fibers fast bluish red shades by the one- or two-bath after-coppering procedures.

IT 2373-98-0, m,m'-Biphenol, 6,6'-diamino-  
(dyes from)

RN 2373-98-0 HCAPLUS

CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 4 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1949:53010 HCAPLUS

DOCUMENT NUMBER: 43:53010

ORIGINAL REFERENCE NO.: 43:9464f-i,9465a

TITLE: Asymmetrical polyazo dyes

INVENTOR(S): Mayer, Hans; Widmer, Willy

PATENT ASSIGNEE(S): Ciba Ltd.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

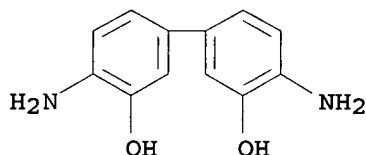
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2476261		19490712	US	

AB Asymmetrical polyazo dyes may be prepd. by coupling the disazo compd. formed from 1 mol tetrazotized 3,3'-dihydroxy-4,4'-diaminobiphenyl and 1 mol. of a coupling component contg. a sulfonic acid group, in the presence of at least 25% pyridine, with a coupling component free from sulfonic acid groups. The coupling component used to form the disazo starting compd. may be a 1-(sulfoaryl)-3-methyl-5-pyrazolone, e.g., 1-(4,8-disulfo-2-naphthyl)-3-methyl-5-pyrazolone, or a hydroxynaphthalene sulfonic acid free from other substituents and capable of coupling in a position vicinal to the OH group, such as 1,3-, 1,4-, 1,5-, 2,4-, 2,5-, 2,6-, or 2,7-hydroxynaphthalenesulfonic acid, or 2-amino-5-hydroxy-7-naphthalenesulfonic acid. The coupling

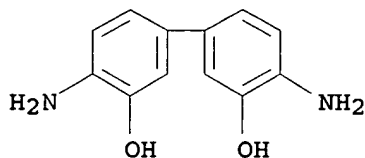
component free from sulfonic acid may be barbituric acid, 2,4-dihydroxyquinoline, 6,8-dihydroxyquinoline, or any similar group capable of coupling in a position vicinal to an OH group. The new **dyes** are suitable for **coloring** cotton, linen, and regenerated cellulose, and may be converted in substance, in the **dye**bath, or on the **fiber**, into complex metal compounds. Thus 2-hydroxynaphthalene is coupled in the presence of at least 25% pyridine with the compound formed by coupling 1 mol. tetrazotized 3,3'-dihydroxy-4,4'-diaminobiphenyl with 1 mol. 2-hydroxy-6-naphthalenesulfonic acid. The new **dye**, violet in water and blue in caustic soda soln., **colors** cellulose **fibers** wash- and lightfast violet tints by the single-bath or two-bath after-coppering process. Similar methods are described for the prepn. of navy blue, violet-black, violet, reddish blue and blue-violet **dyes**.

IT 2373-98-0, m,m'-Biphenol, 6,6'-diamino-  
(**dyes** from)  
RN 2373-98-0 HCAPLUS  
CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



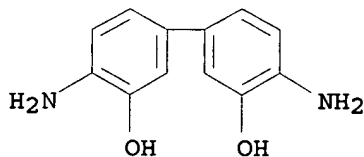
L20 ANSWER 5 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1949:53002 HCAPLUS  
DOCUMENT NUMBER: 43:53002  
ORIGINAL REFERENCE NO.: 43:9462i  
TITLE: Disazo **dye**  
PATENT ASSIGNEE(S): Soc. pour l'ind. chim. a Bale.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	CH 233084		19440916	CH	
AB	Addn. of 30 parts by vol. 30% NaOH to 1-(p-2-hydroxyethylphenyl)-3-methyl-5-pyrazolone 9.36 and Na2CO3 20, in H2O 200 parts, coupling with I at 10-15°, neutralization after 24 hrs. at room temp. with HCl, and salting out gave the disazo <b>dye</b> , a dark powder <b>dyeing</b> animal <b>fibers</b> a wash-and light-fast Bordeaux-red shade after several Cu aftertreatments.				
IT	2373-98-0, m,m'-Biphenol, 6,6'-diamino- ( <b>dyes</b> from)				
RN	2373-98-0 HCAPLUS				
CN	[1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)				



L20 ANSWER 6 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1949:53001 HCAPLUS  
 DOCUMENT NUMBER: 43:53001  
 ORIGINAL REFERENCE NO.: 43:9462g-i  
 TITLE: Disazo dye  
 PATENT ASSIGNEE(S): Soc. pour l'ind. chim. a Bale.  
 SOURCE: Addn. to Swiss 229,184 (C.A. 43, 7699i)  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	CH 233083		19440916	CH	
AB	Addn. of NaNO <sub>2</sub> 2.76 parts in H <sub>2</sub> O to 3,3'-dihydroxy-4,4'-diaminobiphenyl 4.32 and 30% HCl 10, in H <sub>2</sub> O 200 parts, gave the tetrazotized product (I). NaOH (30%) 11 parts by vol. was added to 1-phenyl-3-methyl-5-pyrazolone 7.83 and Na <sub>2</sub> CO <sub>3</sub> 5, in H <sub>2</sub> O 200 parts. I was coupled with this mixt. at 10-15°, and allowed to stand 24 hrs. at room temp. Addn. of 20 parts by vol. 30% NaOH, 6 hrs. stirring, and addn. of 18 parts by vol. of 30% HCl and NaCl pptd. the disazo dye, a gray-black powder, coloring cellulose fibers a fast ruby-red tint with several Cu aftertreatments.				
IT	2373-98-0, m,m'-Biphenol, 6,6'-diamino- (dyes from)				
RN	2373-98-0 HCAPLUS				
CN	[1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)				



L20 ANSWER 7 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1949:45316 HCAPLUS  
 DOCUMENT NUMBER: 43:45316  
 ORIGINAL REFERENCE NO.: 43:8157a-i  
 TITLE: Disazo dye from dihydroxybenzidine

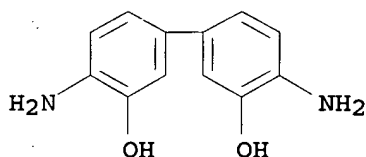
INVENTOR(S): Mayer, Hans; Widmer, Willy  
 PATENT ASSIGNEE(S): Ciba Ltd.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2476259		19490712	US	
GI				For diagram(s), see printed CA Issue.
AB				<p>New disazo <b>dyes</b> for cellulose, cotton, rayon, and animal <b>fibers</b> may be prepd. by coupling tetrazotized 3,3'-dihydroxy-4,4'-diaminobiphenyl (I) with two coupling components stepwise, the first coupling being performed in a medium having a pH ranging from that of an AcOH medium to a medium rendered alk. with an alkali carbonate, and the second coupling taking place in a reaction medium with a higher pH value. The new <b>dyes</b> obtained have the general formula (II) in which R and R' represent the residues of two different coupling components, the first of which contains a group imparting soly., such as a sulfonic acid group, and the second of which is free from groups imparting soly. both coupling components must be capable of coupling in the ortho position to the OH groups. When the <b>dye</b> mol. contains metallizable groups, the <b>dye</b> may be converted in the <b>dye</b>bath or on the <b>fiber</b> by treatment with Cu sources, etc. Thus, 21.6 parts by wt. of I are tetrazotized and coupled in a neutral medium with 25.4 parts 1-(3-sulfophenyl)-3-methyl-5-pyrazolone. A soln. of 18.5 parts acetoacetanilide in 80 parts water and 14 parts caustic soda soln. (30%) is added and stirred until coupling is complete. The new <b>dye</b> is brownish red in water and bluish red in caustic soda soln., and <b>dyes</b> cellulose <b>fibers</b> from a neutral or weakly alk. bath brownish red tints, becoming a fast brownish blue-red upon treatment with Cu salts. Tetrazotized I coupled first with 1-(4-sulfophenyl)-3-methyl-5-pyrazolone, and then with 3-methyl-5-pyrazolone, forms a new <b>dye</b>, blue-red in water, which <b>dyes</b> cellulose <b>fibers</b> from a neutral or weakly alk. bath blue-red tints which become bluish Bordeaux light- and wash-fast tints upon treatment with Cu salts. Tetrazotized I, 1-(4-chloro-3-carboxyphenyl)-3-methyl-5-pyrazolone, and 1-phenyl-3-methyl-5-pyrazolone gives a black-brown powder which <b>dyes</b> cellulose brownish blue-red tints. Tetraazotized I, 1-(4-sulfophenyl)-3-methyl-5-pyrazolone, and barbituric acid gives a <b>dye</b> which imparts red-brown color to cellulose <b>fiber</b>. Tetrazotized I, 2-naphthol-6-sulfonic acid (III) and 2-naphthol <b>dyes</b> cellulose violet tints. Instead of III 2-naphthol-4(or 7)sulfonic acid or 1-naphthol-4(or 5)sulfonic acid may be used to obtain more bluish shades. I tetrazotized and coupled with 6-amino-1-naphthol-3-sulfonic acid (IV) and 2-naphthol gives a blue-black powder which <b>dyes</b> cellulose <b>fibers</b> blue which on coppering become red-blue. In place of IV 7-amino-1-naphthol-3-sulfonic acid will react to give a dull blue while 5,5'-dihydroxy-2,2'-dinaphthylamine-7,7'-disulfonic acid gives clear blue-green tints. From tetrazotized I, IV, and</p>



2,6-naphthalenediol, 6-methoxy-2-naphthol, or 5,8-dichloro-1-naphthol similar **dye**stuffs are obtained. If 1-(8-sulfonaphthyl)-3-methyl-5-pyrazolone is used a violet **dye** for cellulose is obtained. Tetrazotized I, 5,5'-dihydroxy-2,2'-dinaphthylamine-7,7'-disulfonic acid and 1-phenyl-3-methyl-5-pyrazolone gave a violet **dye** for cellulose. After coppering they became blue-violet. I, 2-naphthol-7-sulfonic acid, and IV give a blue **dye** for cellulose. In place of IV 6-anilino- or 6-(2-hydroxyethylamino)-1-naphthol-3-sulfonic acid gives greenish tints. Instead of 2-naphthol-7-sulfonic acid, 1-naphthol-4-sulfonic acid gives a similar **dye**; 1-naphthol-5-sulfonic acid gives a dull red-blue whereas 1-naphthol-3-sulfonic acid gives green-blue shades. Tetrazotized I, 3-methyl-5-pyrazolone, and 2,8-naphthalenediol-6-sulfonic acid give violet tints on cellulose.

IT 2373-98-0, m,m'-Biphenol, 6,6'-diamino-  
(**dyes** from)  
RN 2373-98-0 HCAPLUS  
CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 8 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1949:45313 HCAPLUS  
DOCUMENT NUMBER: 43:45313  
ORIGINAL REFERENCE NO.: 43:8155i,8156a-c  
TITLE: Disazo **dyes**  
INVENTOR(S): Mayer, Hans; Widmer, Willy  
PATENT ASSIGNEE(S): Ciba Ltd.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2476260		19490712	US	

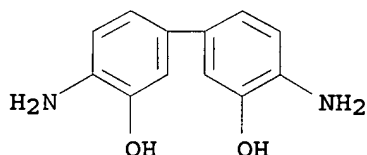
AB Sulfo-free disazo **dyes** may be prepd. by coupling tetrazotized 3,3'-dihydroxy-4,4'-diaminobiphenyl (I) in the presence of a considerable amt. of pyridine with a naphthol capable of coupling in a position vicinal to an OH group. Asymmetric disazo **dyes** may be formed by coupling 1 mol. I with 1 mol. each of 2 different naphthols, while symmetrical **dyes** may be formed by coupling 1 mol. I with 2 mols. of an appropriate naphthol. These **dyes** are suitable for coloring linen, cotton, and regenerated cellulose, and may be converted in substance, in the bath, or on the fiber into metal compds.

by treatment with Cu, Fe, Ni, or Co salts. Thus, 21.6 parts by wt. of I are tetrazotized and coupled with 33 parts 2,6-dihydroxynaphthalene (II) to form a dark blue powder, greenish blue in dil. caustic soda, for coloring cellulose fibers wash- and light-fast navy blue tints by the single-bath or two-bath after-coppering process. The tetrazo compd. obtained from 21.6 parts I is coupled in an alk. medium in the presence of pyridine with 46 parts 2-hydroxy-6-naphthalenesulfonamide (III), to form a dye violet in water and blue in caustic soda soln., which colors cellulose fibers wash- and light-fast blue-violet tints by the single-bath or two-bath after-coppering process. Other dyes were prepd. from I and 1,5, 2,3, 2,6, and 2,7 derivs. of II or from 1,4, 1,5, 1,8, 2,5, and 2,7 derivs. of III or with 2-(HO)C10H6CH2CH2OH.

IT 2373-98-0, m,m'-Biphenol, 6,6'-diamino-  
(dyes from)

RN 2373-98-0 HCAPLUS

CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 9 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1949:42686 HCAPLUS

DOCUMENT NUMBER: 43:42686

ORIGINAL REFERENCE NO.: 43:7700f-g

TITLE: Disazo dye

PATENT ASSIGNEE(S): Soc. pour l'ind. chim. a Bale

DOCUMENT TYPE: Patent

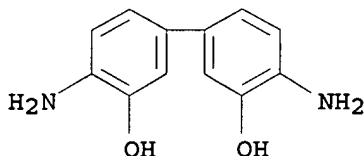
LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	CH 231843		19440717	CH	
AB	3,3'-Dihydroxybenzidine (4.32 parts) is tetrazotized with NaNO <sub>2</sub> and HCl, then coupled with 1-(3'-nitrophenyl)-3-methyl-5-pyrazolone 11, 30% NaOH 10 (vol. parts) and Na <sub>2</sub> CO <sub>3</sub> 5 in H <sub>2</sub> O 200 1 hr. at 10-12°, then 24 hrs. at 18-20°; addn. of HCl ppts. the disazo dye, a green bronze powder, red-orange in dil. alkali, bluish red in concd. H <sub>2</sub> SO <sub>4</sub> , and dyeing cotton and other cellulose fibers, after 1 or 2 aftertreatments with Cu, a wash- and light-fast Bordeaux-red.				
IT	2373-98-0, m,m'-Biphenol, 6,6'-diamino- (dyes from)				
RN	2373-98-0 HCAPLUS				

CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 10 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

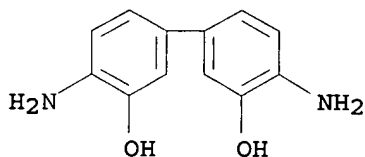
ACCESSION NUMBER: 1949:42685 HCAPLUS  
 DOCUMENT NUMBER: 43:42685  
 ORIGINAL REFERENCE NO.: 43:7699i,7700a-f  
 TITLE: Disazo cotton **dyes**  
 PATENT ASSIGNEE(S): Soc. pour l'ind chim. a Bale  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CH 232503		19440816	CH	

AB Addns. to Swiss 229,184 (cf. preceding abstr.). Tetrazotized 3,3'-dihydroxybenzidine (I) 4.32 is coupled with a soln. of 1-(4'-hydroxy-3-carboxyphenyl)-3-methyl-5-pyrazolone 9.4 in Na<sub>2</sub>CO<sub>3</sub> 100 and H<sub>2</sub>O 100 parts. The temp. of coupling is 10-12° for the first 2 hrs. and then 35-40° for 40-50 hrs. The finished **dye** is isolated by filtration. A light-fast wine-red shade is obtained on cotton with the coppered **dye**. In Swiss 232,504, tetrazotized I 4.32 is coupled with 1-(3-nitrophenyl)-3-methyl-5-pyrazolone 9.86 dissolved in H<sub>2</sub>O 200, Na<sub>2</sub>CO<sub>3</sub> 5, and 11 parts by vol. of 30% NaOH soln. The coupling proceeds 24 hrs. at room temp. Then, 20 parts by vol. of NaOH soln. is added and stirred for 6 addnl. hrs. The **dye** is pptd. by neutralizing with HCl, salting, and filtering. After-coppering on cotton **fiber** gives fast wine-red shades. In Swiss 232,505, tetrazotized I 21.6 parts is coupled with 3-methyl-5-pyrazolone 19.6, with Na<sub>2</sub>CO<sub>3</sub> 44 in H<sub>2</sub>O 400 parts as the medium. The coupling time is 20 hrs. at 10-25°. The **dyeing** properties are similar to the previous examples. In Swiss 232,506 tetrazotized I 21.6 parts is neutralized with Na<sub>2</sub>CO<sub>3</sub> 6.4 and coupled with di-Na 5,5'-dihydroxy-2,2'-dinaphthylamine-7,7'-disulfonate 103 in H<sub>2</sub>O 130 and KOH 30 parts. After 24 hrs. coupling at 10-15° the temp. is raised to 20-30° for completion. Other coupling media may be NH<sub>3</sub> or NaOH. The aftercoppering **dyeing** method gives fast blue shades on cotton. In Swiss 232,507, I 10.8 parts is coupled as a tetrazo with 2-phenylamino-5-hydroxy-7-naphthalenesulfonic acid (II). The resulting coppered **dye** gives blue shades on cotton. In Swiss 232,508, tetrazotized I 10.8 parts is coupled in Ca(OH)<sub>2</sub> 30, H<sub>2</sub>O 200 with 2-(4-hydroxy-3-carboxyphenylamino)-5-hydroxynaphthalene-

7-sulfonic acid 37.5 parts. After complete coupling, Na<sub>2</sub>CO<sub>3</sub> is added to ppt. the CaCO<sub>3</sub>. The **dye** is sepd. from the HCl-neutralized mother liquor by salting and filtering. The coppered **dye** is of blue shade on cotton. In Swiss 232,509, a similiar blue **dye** is obtained by coupling tetrazotized I 21.6 parts (in Ca(OH)<sub>2</sub> soln.) with 2-(2-hydroxyethylamino)-5-hydroxy-7-naphthalenesulfonic acid 58.5 parts. In Swiss 232,510, another similiar blue **dye** is obtained from tetrazotized I 10.8 parts with 1,8-dihydroxy-4-naphthalenesulfonic acid 12 in the presence of Ca(OH)<sub>2</sub> 20. After stirring 1 hr. at 5-8° and 1 hr. at 10-15°, a mixt. of II 15.8 and Ca(OH)<sub>2</sub> 9 in H<sub>2</sub>O 100 parts is added. The coupling is stirred at 25-30° to completion. Isolation of the finished **dye** is similiar to the previous examples.

IT 2373-98-0, m,m'-Biphenol, 6,6'-diamino-  
(**dyes** from)  
RN 2373-98-0 HCAPLUS  
CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)

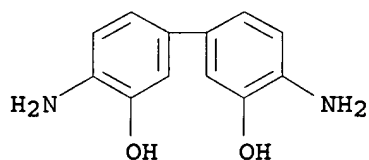


L20 ANSWER 11 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1949:42684 HCAPLUS  
DOCUMENT NUMBER: 43:42684  
ORIGINAL REFERENCE NO.: 43:7699h-i  
TITLE: Disazo **dye**  
PATENT ASSIGNEE(S): Soc. pour l'ind. chim. a Bale  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CH 229184		19440103	CH	

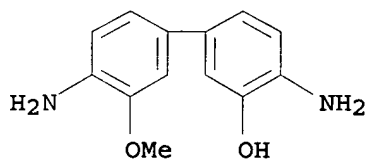
AB Tetrazotized-3,3'-dihydroxybenzidine 4.32 is coupled with 1-(3-sulfamylphenyl)3-methyl-5-pyrazolone 10.7 parts. The product **dyes** cotton and other cellulose **fibers** either by the single or two-bath coppering method, giving fast Bordeaux-red shades.

IT 2373-98-0, m,m'-Biphenol, 6,6'-diamino-  
(**dyes** from)  
RN 2373-98-0 HCAPLUS  
CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 12 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1949:42664 HCAPLUS  
 DOCUMENT NUMBER: 43:42664  
 ORIGINAL REFERENCE NO.: 43:7697c-d  
 TITLE: Azo dye  
 PATENT ASSIGNEE(S): Soc. pour l'ind. chim. a Bale  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	CH 233846		19441201	CH	
AB	A new azo dye is obtained by combining diazotized 4-aminopyrocatechol ethylene ether with 4-MeC6H4OH. The new dye is a yellow powder which dissolves with a yellow color in org. solvents, such as alc., EtOAc, etc. When treated with a thinner, it forms a fine paste which gives a fine dispersion in water for dyeing rayon acetate fibers fast yellow tones.				
IT	87084-62-6, Phenol, 2-amino-5-(4-amino-3-methoxyphenyl)-(azo dyes from)				
RN	87084-62-6 HCAPLUS				
CN	[1,1'-Biphenyl]-3-ol, 4,4'-diamino-3'-methoxy- (9CI) (CA INDEX NAME)				

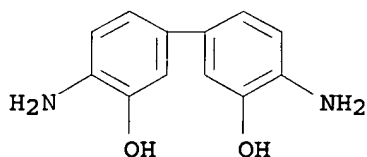


L20 ANSWER 13 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1949:35490 HCAPLUS  
 DOCUMENT NUMBER: 43:35490  
 ORIGINAL REFERENCE NO.: 43:6424g-i  
 TITLE: Coupling reactions with diazotized dyes  
 PATENT ASSIGNEE(S): Ciba Ltd.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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	CH 255413		19490117	CH	
AB	Diazo compds. of 3,3'-dihydroxy-4,4'-diaminobiphenyl (I) are coupled with components, preferably naphthalene derivs. (II), free of sulfonic acid groups. Coupling is effected in position adjacent to an OH group in absence of complex-forming metal salts and in presence of aliphatic amines (III). Tetrazo products of I or diazo products of one mol. I, combined with one mol. of a coupling component are used. II are dihydroxy-, aminohydroxy-, or halogenated hydroxynaphthalenes. III are water-sol. aliphatic amines, contg. lower alkyls, or alkanolamines. In an example I is tetrazotized and coupled with 2,6-dihydroxynaphthalene in presence of H <sub>2</sub> O and triethanolamine. The reaction's product <b>dyes</b> cellulosic <b>fibers</b> a navy shade fast to washing and light when aftertreated with Cu salts according to the one- or two-bath method.				
IT	2373-98-0, m,m'-Biphenol, 6,6'-diamino- ( <b>dyes</b> from)				
RN	2373-98-0 HCAPLUS				
CN	[1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)				



L20 ANSWER 14 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1949:30709 HCAPLUS

DOCUMENT NUMBER: 43:30709

ORIGINAL REFERENCE NO.: 43:5597b-c

TITLE: Azo **dye**

PATENT ASSIGNEE(S): Ciba Ltd.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

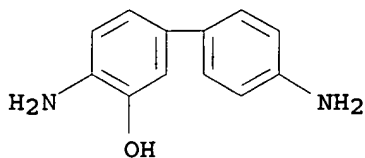
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
	CH 242160		19460902	CH	
AB	A new azo <b>dye</b> capable of <b>dyeing</b> plant <b>fibers</b> wash- and lightfast red tones in a Cu-salt bath is prepd. by coupling tetrazotized 3-hydroxy-4,4'-diaminobiphenyl first with salicylic acid and then with 1-(4-hydroxy-3-carboxyphenyl)-3-methyl-5-pyrazolone. The new <b>dye</b> is a dark powder,				

orange-brown in water and robin-red in concd. H2SO4.

IT 3366-54-9, Phenol, 2-amino-5-(p-aminophenyl)-  
(azo **dyes** from)

RN 3366-54-9 HCAPLUS

CN [1,1'-Biphenyl]-3-ol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 15 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1949:30708 HCAPLUS

DOCUMENT NUMBER: 43:30708

ORIGINAL REFERENCE NO.: 43:5597a-b

TITLE: Azo **dye**

PATENT ASSIGNEE(S): J. R. Geigy A.-G.

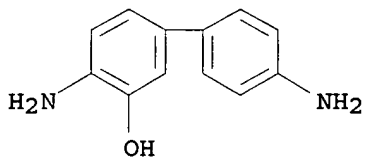
DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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	CH 241207		19460701	CH	
AB	4-Nitro-4'-hydroxy-1,1'-azobenzene-3'-carboxylic acid-2-sulfonic acid is condensed with 4-aminodiphenylamine-2-sulfonic acid in alk. medium. The new azo <b>dye</b> gives reddish brown prints on cellulose <b>fibers</b> which are fast against soap, soda, Cl, and light.				
IT	3366-54-9, Phenol, 2-amino-5-(p-aminophenyl)- (azo <b>dyes</b> from)				
RN	3366-54-9 HCAPLUS				
CN	[1,1'-Biphenyl]-3-ol, 4,4'-diamino- (9CI) (CA INDEX NAME)				



L20 ANSWER 16 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1949:28358 HCAPLUS

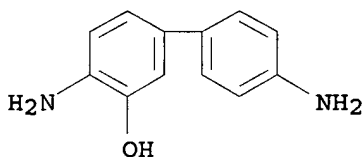
DOCUMENT NUMBER: 43:28358

ORIGINAL REFERENCE NO.: 43:5198f-g

TITLE: Metallizable azo **dyes**

PATENT ASSIGNEE(S): Ciba Ltd.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	CH 244512		19470401	CH	
AB	I is coupled with salicylic acid 1 and then with 1-(3-aminophenyl)-3-methyl-5-pyrazolone 1 mol.; the disazo dye is diazotized and coupled with III to give a red dye.				
IT	3366-54-9, Phenol, 2-amino-5-(p-aminophenyl)-(azo dyes from)				
RN	3366-54-9 HCAPLUS				
CN	[1,1'-Biphenyl]-3-ol, 4,4'-diamino- (9CI) (CA INDEX NAME)				

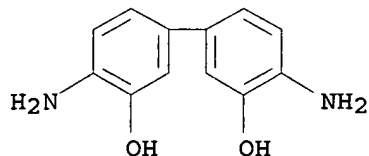


L20 ANSWER 17 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1949:26315 HCAPLUS  
DOCUMENT NUMBER: 43:26315  
ORIGINAL REFERENCE NO.: 43:4866c-f  
TITLE: Trisazo dyes  
PATENT ASSIGNEE(S): Ciba Ltd.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	CH 244770		19470516	CH	
AB	Gray boil-fast dyes for cellulose fibers are prepd. To 2,6-dichloro-4-nitroaniline (I) 20.7, previously diazotized in nitrosylsulfuric acid, iced, and neutralized with MgO 30, is added a neutral soln. of 5-amino-2-naphthalenesulfonic acid (II) 22.3 parts. The coupling is completed with AcONa, filtered, resludged in water and Na <sub>2</sub> CO <sub>3</sub> , salted out, and filtered. This monoazo dye (III) is further diazotized and coupled again as above with II, rediazotized, and coupled in alk. medium with 6-anilino-1-naphthol-3-sulfonic acid (IV) to give the desired trisazo dye.				
IT	2373-98-0, m,m'-Biphenol, 6,6'-diamino-(dyes from)				



RN 2373-98-0 HCAPLUS  
 CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



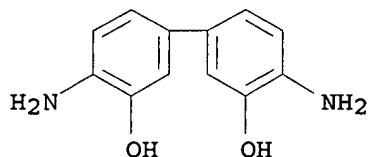
L20 ANSWER 18 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1949:23934 HCAPLUS  
 DOCUMENT NUMBER: 43:23934  
 ORIGINAL REFERENCE NO.: 43:4476b-d  
 TITLE: Disazo dyes  
 PATENT ASSIGNEE(S): Soc. pour l'ind. chim. a Bale  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 609302		19480929	GB	

AB Disazo dyes (I) for coloring cellulose and animal fibers are prepd. by coupling, in an alk. medium, tetrazotized 3,3'-dihydroxy-4,4'-diaminobiphenyl (I) with 2 mols. of the same or different components, at least one of which is 1-hydroxynaphthalenesulfonic acid (II) contg. an auxochromic group in the 8-position. I may be converted into complex metal compds. in the dyebath or in the fiber. Coupling compds. were 1-amino-8-hydroxy-4-naphthalenesulfonic acid, 1-amino-8-hydroxy-2,4-naphthalenedisulfonic acid (II), 1-amino-8-hydroxy-4,6-naphthalenedisulfonic acid (III), 1-amino-8-hydroxy-3,6-naphthalenedisulfonic acid (IV), 1-tolylsulfonamido-8-hydroxy-4-naphthalenesulfonic acid, and 1-anilino-8-hydroxy-4-naphthalenesulfonic acid. In the case of II, III, and IV, copper sulfate was added during the coupling process and a Cu compd. separated. BaO, Mg(OH)2, Ca(OH)2, and KOH solns. were used during coupling.

IT 2373-98-0, m,m'-Biphenol, 6,6'-diamino- (dyes from)

RN 2373-98-0 HCAPLUS  
 CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 19 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1949:23930 HCAPLUS

DOCUMENT NUMBER: 43:23930

ORIGINAL REFERENCE NO.: 43:4475g-i,4476a

TITLE: Monoazo **dyes**

PATENT ASSIGNEE(S): Sandoz Ltd.

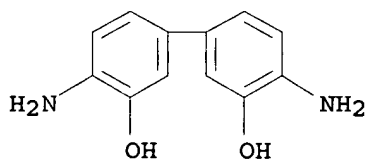
DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

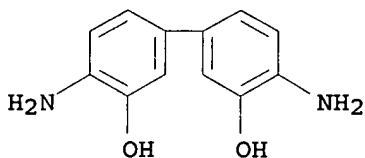
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	CH 232049		19440717	CH	
AB	<p>A monoazo <b>dye</b> (I) is prepd. when 4-amino-o-cresotic acid (II) 16.7 suspended in H<sub>2</sub>O 80 and 30% HCl 17.5 is diazotized at 0-2° with NaNO<sub>2</sub> 6.9 in the usual way, and Na 2-naphthol-4-sulfonate 24.6 parts is added to the suspension of the diazo compd. so obtained. Coupling takes place with gradual neutralization of the acid reaction and with addnl. stirring until the diazo compd. disappears. I ppts. as brown needles and gives pronounced brown shades on wool, as well as in chrome-printing on cellulose <b>fibers</b>, of good Cl- and wash-resistance. Likewise, in Swiss 232,050, the use of 4-amino-6-sulfosalicylic acid 23.3 parts for II yields a I which gives orange-brown shades on wool upon afterchroming and, in calico printing, gives quickly fixed, somewhat red-tinged brown impressions of good Cl- and wash-resistance. Likewise, in Swiss 232,051, the use of 4-amino-6-chlorosalicylic acid 18.8 parts for II yields a I which gives brown shades on wool upon afterchroming and quickly fixed, pronounced chrome printings of good Cl- and wash-resistance.</p>				
IT	2373-98-0, m,m'-Biphenol, 6,6'-diamino- ( <b>dyes</b> from)				
RN	2373-98-0 HCAPLUS				
CN	[1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)				



L20 ANSWER 20 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1948:1791 HCAPLUS  
 DOCUMENT NUMBER: 42:1791  
 ORIGINAL REFERENCE NO.: 42:377i,378a-f  
 TITLE: Tris and higher polyazo **dyes** from  
 3,3'-dihydroxybenzidine  
 INVENTOR(S): Straub, Fritz; Brassel, Jakob; Pieth, Peter  
 PATENT ASSIGNEE(S): Soc. pour l'ind. Chim. a Bale  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	US 2428130		19470930	US	
GI	For diagram(s), see printed CA Issue.				
AB	<p>Substantive <b>dyes</b> capable of being metalized in the bath or on the <b>fiber</b> are prepd. by coupling tetrazotized 3,3'-dihydroxybenzidine (I) with various coupling compds., one or both couplers being an azo <b>dye</b> capable of coupling. For example (A) is prepd. by coupling I with 2 mols. di-Na 5,5'-dihydroxy-2,2'-dinaphthylamine-7,7'-disulfonate (II) which then is coupled with 2 mols. diazotized 4-hydroxy-3-aminobenzenesulfonamide (III). The tetrakisazo <b>dye</b> is a greyish black powder, forming in water violet, in 10% soda reddish blue, in 10% NaOH reddish violet, and in concd. H2SO4 blue solns., and <b>dyeing</b> cotton blue shades after coppering. Similar <b>dyes</b> are obtained by replacing III with 2-hydroxy-4-chloroaniline, 1-hydroxy-2-amino-4,6-dinitrobenzene, 2-amino-4-nitrobenzoic acid, or 5-nitro-2-aminophenol (IV). Acid coupled diazotized 5-amino-2-hydroxybenzoic acid and 2-methoxy-5-methylaniline further diazotized and coupled with A <b>dyes</b> cotton fast blue shades by aftercoppering. By replacing II with 6,6'-ureylene-bis[1-naphthol-3-sulfonic acid] and coupling with III a <b>dye</b> yielding violet shades after coppering is produced. I coupled with 1 mol. 1-phenyl-3-methyl-5-pyrazolone and 1 mol. resorcinol (V), then coupled with 1 mol. diazotized 5-nitro-2-aminobenzenesulfonic acid <b>dyes</b> cotton brownish Bordeaux shades after coppering. I coupled with 2 mols. 1-(5-hydroxy-7-sulfo-2-naphthyl)-3-methyl-5-pyrazolone in the pyrazolone ring and coupled with 2 mols. diazotized anthranilic acid <b>dyes</b> cotton similar shades. I coupled with 2 mols. V then coupled with 2 mols. diazotized p-chloroaniline <b>dyes</b> fast violet shades after coppering. One mol. of the compd. (VI) prepd. by coupling I with 1 mol. V is coupled with 2 mols. of the disazo-azo compd. from I and salicylic acid to yield a hexakisazo <b>dye</b>. The greyish black powder forms in water yellow brown, in 10% soda brown, in 10% NaOH reddish brown, and in concd. H2SO4 violet solns. It <b>dyes</b> cotton after coppering in brown shades. Two mols. of the monoazo <b>dye</b> prepd. by coupling diazotized IV with 1 mol. V is coupled with I. The greyish black powder forms in water brownish red, in 10% soda violet brown, and in concd. H2SO4 reddish violet solns. It <b>dyes</b> cotton</p>				

brownish violet shades after coppering.  
 IT 2373-98-0, m,m'-Biphenol, 6,6'-diamino-  
 (dyes from)  
 RN 2373-98-0 HCAPLUS  
 CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 21 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1948:1788 HCAPLUS  
 DOCUMENT NUMBER: 42:1788  
 ORIGINAL REFERENCE NO.: 42:376e-i,377a-b  
 TITLE: Disazo **dyes** from dihydroxybenzidines  
 INVENTOR(S): Straub, Fritz  
 PATENT ASSIGNEE(S): Soc. pour l'ind. chim. a Bale  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2426977		19470909	US	

AB **Dyes** suitable for **dyeing** diverse materials and which can be metallized in substance, in the bath, or on the **fiber**, are prepd. by coupling tetrazotized 3,3'-dihydroxybenzidine (I) with 2 mols. of like or unlike aminonaphtholsulfonic acid coupling components. The use of alkali or alk. earth hydroxides or NH<sub>4</sub>OH makes coupling easier. For example, 10.8 parts I are tetrazotized, the crystd. tetrazoxide (II) is filtered, and is coupled with 12 parts 1,8-naphthalenediol-4-sulfonic acid (III) in H<sub>2</sub>O with 20 parts Ca(OH)<sub>2</sub> in 1 hr. at 10-15°. Then 15.8 parts 6-anilino-1-naphthol-3-sulfonic acid (IV) are coupled thereto with 9 parts Ca(OH)<sub>2</sub> 1 hr. After sepn. and drying the **dye** is a dark green bronzy powder sol. in H<sub>2</sub>O and dil. caustic alkali to give reddish blue, in dil. soda cornflower blue, and in concd. H<sub>2</sub>SO<sub>4</sub> greenish blue solns. It yields after coppering, pure blue shades on vegetable **fibers** of good fastness to washing and light. By replacing III with 6-(4-hydroxy-3-carboxyanilino)-1-naphthol-3-sulfonic acid (V) a similar **dyeing** is obtained. The **dye** from II coupled with 2 mols. V yields on cotton, upon aftertreating with Cu, pure blue shades fast to washing and light. II coupled with 6-(2-hydroxyethylamino)-1-naphthol-3-sulfonic acid yields a black bronzy powder **dyeing** cotton with aftercoppering by a 1 or 2 bath process pure blue shades of good fastness. Other **dyes** prepd. are: II with 6,6'-iminobis[1-naphthol-3-sulfonic

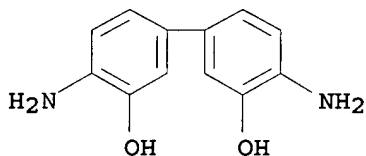
acid], black bronzy powder forming in water violet, in dil. soda blue, in caustic alkali blue violet, and in concd. H<sub>2</sub>SO<sub>4</sub> greenish blue solns. It **dyes** cotton fast blue shades after coppering. II with 8-anilino-1-naphthol-5-sulfonic acid is a black powder forming in water blue, in dil. soda greenish blue, in caustic alkali reddish blue, and in concd. H<sub>2</sub>SO<sub>4</sub> greenish blue solns. It **dyes** cotton aftertreated with Cu green-blue shades. II with 8-(tolylsulfonfylamino)-1-naphthol-5-sulfonic acid is a bronzy black powder forming in water blue, in caustic alkali reddish blue, in dil. soda blue, and in concd. H<sub>2</sub>SO<sub>4</sub> green solns. Aftertreated with Cu on cotton it gives green shades. II with 2 mols. IV yields a dark **colored** powder forming in water violet, in caustic alkali and concd. H<sub>2</sub>SO<sub>4</sub> blue solns. It **dyes** cotton and regenerated cellulose blue shades improved in fastness to washing and light by Cu. II coupled with 8-amino-1-naphthol-3,6-disulfonic acid (VI) acetylated with Ac<sub>2</sub>O and converted in substance to the Cu compd. is a greyish black powder yielding pure blue shades on cotton. A similar compd. is prepd. by coupling II with the N-Ac deriv. of VI.

IT 2373-98-0, m,m'-Biphenol, 6,6'-diamino-

(**dyes** from)

RN 2373-98-0 HCAPLUS

CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 22 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1948:1787 HCAPLUS

DOCUMENT NUMBER: 42:1787

ORIGINAL REFERENCE NO.: 42:376c-e

TITLE: Metallizable disazo **dyes** from tetrazotized 3,3'-dihydroxy-4,4'-diaminobiphenyl

INVENTOR(S): Straub, Fritz; Brassel, Jakob; Pieth, Peter

PATENT ASSIGNEE(S): Soc. pour l'ind. chim. a Bale

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2427537		19470916	US	

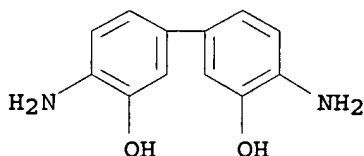
AB Metallizable disazo **dyes** (I) are prepd. by coupling tetrazotized 3,3'-dihydroxy-4,4'-diaminobiphenyl (II) with 2 mols. of coupling components, at least 1 of which is a 1-naphthol contg. an auxochrome group in the 8-position. I are esp. suited for **dyeing** cellulose and other vegetable **fibers**, and

also for dyeing wool, silk, and leather, and they are metalizable with salts of Cu, Co, Ni, Fe, Cr, V, and Mn. I dye in blue to black shades. I are prepd. from tetrazotized II and 2,6-naphthalenediol, 1,5-naphthalenediol, 2,7-naphthalenediol, 8-amino-2-naphthol, 7-amino-2-naphthol, 6-amino-2-naphthol, 2,6-naphthalenediol monoglyceryl ether, or 1-naphthol-8-sulfonamide.

IT 2373-98-0, m,m'-Biphenol, 6,6'-diamino-  
(dyes from)

RN 2373-98-0 HCAPLUS

CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 23 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1948:1786 HCAPLUS

DOCUMENT NUMBER: 42:1786

ORIGINAL REFERENCE NO.: 42:375i,376a-c

TITLE: Insoluble sulfonyl fluoride disazo dyes

INVENTOR(S): Parker, Robert P.; Hofmann, Corris M.

PATENT ASSIGNEE(S): American Cyanamid Co.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

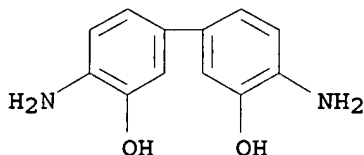
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2427995		19470923	US	
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AB Water-insol. disazo dyes showing good wash fastness are prepd. and have the general formula: ArN:NAr'N:NX, in which X is an ice color coupler, Ar is a benzene residue, and Ar' is a benzene or naphthalene residue. The residues are free from solubilizing groups, and at least one of them contains a SO<sub>2</sub>F group. The SO<sub>2</sub>F group causes a general lightening and brightening of the shade. For example, diazotized 3-amino-4-methylbenzenesulfonyl fluoride (I) coupled with 1-naphthylamine yields 3-(4-amino-1-naphthylazo)-4-methylbenzenesulfonyl fluoride (II), m. 197-200° (from dil. EtOH). Diazotized II printing paste coupled on the fiber with N-phenyl-3-hydroxy-2-naphthamide (III) gives a bluish gray pattern. I coupled with o-phenetidine and diazotized and coupled with III dyes cotton a deep maroon. Diazotized 3-aminobenzenesulfonyl fluoride coupled with 2,5-dimethoxyaniline (IV) and diazotized and coupled with III prints a strong blue of bright reddish shade. IV with N-1-naphthyl-3-hydroxy-2-naphthamide (V) dyes a strong blue of high brilliance. IV with N-(o-ethoxyphenyl)-3-hydroxy-2-naphthamide

gives bluer **dyeings**. IV with the 2-naphthyl isomer of V gives royal blue; with N-o-tolyl-2-hydroxy-3-carbazolecarboxamide purple; with N,N'-bis(acetylacetyl)-o-tolidine, scarlet; with N-(4-chloro-o-tolyl)-3-hydroxy-2-naphthamide, greenish blue. Diazotized 2-chloro-4-nitroaniline with I, diazotized and coupled with III, gives a red **pigment**.

IT 2373-98-0, m,m'-Biphenol, 6,6'-diamino-  
(**dyes** from)  
RN 2373-98-0 HCAPLUS  
CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 24 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1947:26652 HCAPLUS  
DOCUMENT NUMBER: 41:26652  
ORIGINAL REFERENCE NO.: 41:5316a-d  
TITLE: Anthraquinone **dyes**  
PATENT ASSIGNEE(S): Sandoz Ltd.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

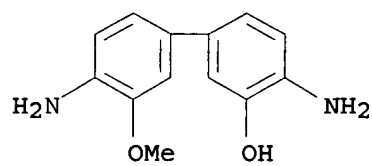
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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GB 580351		19440705	GB	
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GI For diagram(s), see printed CA Issue.

AB Anthraquinone **dyes** (I) of the general formula are described in which one X is a SO<sub>3</sub>H group, the other X is H, and R is H or Me. I are prepd. by the reaction of a salt of 1-amino-4-bromo-2,7(or 2,6)-anthraquinonedisulfonic acid with monoacylaminoanilines (II). I may also be prepd. by the reaction of a salt of 1-amino-2,4-dibromo-6(or 7)-anthraquinonesulfonic acid with II, followed by treatment with K<sub>2</sub>SO<sub>3</sub> soln. The salts of 1-amino-4-[x-(acylamino)anilino]-2,6(or 2, 7)-anthraquinonedisulfonic acid **dye** wool, silk, and synthetic **fibers** (nylon) greenish blue shades. Cf. following abstr.

IT 87084-62-6, Phenol, 2-amino-5-(4-amino-3-methoxyphenyl)-  
(azo **dyes** from)  
RN 87084-62-6 HCAPLUS  
CN [1,1'-Biphenyl]-3-ol, 4,4'-diamino-3'-methoxy- (9CI) (CA INDEX NAME)



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